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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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09/938,459

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Charles P. Norman

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EXAMINER

KIM, KEVIN

ART UNIT .

PAPER NUMBER

2611

MAIL DATE

DELIVERY MODE

01/02/2008

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

09/938,459

Applicant(s)

NORMAN, CHARLES P.

Examiner

Kevin Y. Kim

Art Unit

2611

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 30 November 2007.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-3,5-12,14,15,17 and 19-22 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-3,5-12,14,15,17 and 19-22 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- ☐ Notice of References Cited (PTO-892)
- ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- ☒ Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____
- ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- ☐ Notice of Informal Patent Application
- ☐ Other: _____

DETAILED ACTION

Continued Examination Under 37 CFR 1.114

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after allowance or after an Office action under *Ex Parte Quayle*, 25 USPQ 74, 453 O.G. 213 (Comm'r Pat. 1935). Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, prosecution in this application has been reopened pursuant to 37 CFR 1.114.

Applicant's submission filed on November 30, 2007 has been entered.

Claim Rejections - 35 USC § 112

2. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

3. Claims 1-3,5-12,14,15,17,19-22 are rejected under 35 U.S.C. 112, first paragraph, as based on a disclosure which is not enabling. A claimed invention comprising a feature critical or essential to the practice of the invention, but not included in the claim(s) is not enabled by the disclosure. See *In re Mayhew*, 527 F.2d 1229, 188 USPQ 356 (CCPA 1976). The specification discloses that a separately received frequency reference signal (114), illustrated in Fig.1, is mixed with a carrier-removed GPS signal and the resultant signal is provided to a comb filter. The specification fails to describe the mixing of the separately received frequency reference signal is merely preferred. It also fails to disclose an embodiment where the separately received frequency reference signal is not used at all to achieve the objective of the present invention.

For the purpose of compact prosecution, the mixing of the separately received frequency reference signal with the carrier-removed GPS signal is considered as implicitly recited.

Claim 8 recites filtering the another first resultant signal (118) further includes matching the first resultant signal (113) with the second compressed GPS signal (130). Reference numerals added as best understood in light of Fig.1. However, the first resultant signal (113) and the second compressed GPS signal (130) are not operated on together at all.

Double Patenting

4. The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. A nonstatutory obviousness-type double patenting rejection is appropriate where the conflicting claims are not identical, but at least one examined application claim is not patentably distinct from the reference claim(s) because the examined application claim is either anticipated by, or would have been obvious over, the reference claim(s). See, e.g., *In re Berg*, 140 F.3d 1428, 46 USPQ2d 1226 (Fed. Cir. 1998); *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) or 1.321(d) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent either is shown to be commonly owned with this application, or claims an invention made as a result of activities undertaken within the scope of a joint research agreement.

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

5. Claims 1-3,5-7, 9 and 22 are provisionally rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claim 1 of copending Application

No. 09/938,387. Although the conflicting claims are not identical, they are not patentably distinct from each other.

Claim 1.

i) the steps of "receiving the GPS signal" and "removing a carrier component of the GPS signal" read on "a first mixer for removing a carrier component of the GPS signal."

ii) the step of "matching a comb filter" reads on "a comb filter."

iii) the step of "frequency shifting the filter lines" reads on "a frequency shifter for shifting the filter lines."

The only seemingly substantial difference is that in the '387 application a second mixer is further included that mixes the carrier-removed GPS signal and a separately received frequency reference signal. However, as discussed above in connection with the rejection of the claims under 35 USC 112 first paragraph, such a feature is essential and is considered implicitly recited in the claim of the present application.

Finally, claim 1 of '387 application is an apparatus claim while claim 1 of the present application is a method claim. However, since the elements of the apparatus claim perform same functions defined in the steps of the method claim, it would have been obvious to one skilled in the art at the time the invention was made to derive the claimed steps from the claimed apparatus.

This is a provisional obviousness-type double patenting rejection because the conflicting claims have not in fact been patented.

Claim 2 is obvious over claim 2 of '387 application since both claims further include "a second frequency shifter" which is the same as a bandpass filter according to the specification.

Claim 3 is obvious over claim 1 of '387 application since claim 3 now explicitly includes a separately received frequency reference signal, which has to be mixed with the carrier-removed GPS signal, that is applied to the comb filter.

Claim 5 is obvious over claim 1 of '387 application because the step of generating a plurality of mixing signals and mixing the resultant signal with the plurality of mixing signal is essentially what is performed by the frequency shifter of claim 1 of '387 application.

Claim 6 is obvious over claim 2 of '387 application since both claims further include "a second frequency shifter" which is the same as a bandpass filter according to the specification.

Claim 7 is obvious over claim 1 of '387 application since claim 7 now explicitly includes receiving a separately received frequency reference signal, mixing it with the carrier-removed GPS signal, i.e. a first resultant signal, that is applied to the comb filter.

Claim 9 is obvious over claim 7 of '387 application because both claims send a second compressed GPS to the base station.

Claim 22. It is well known that the location information of the receiver is derived from the GPS signal.

6. A rejection based on double patenting of the "same invention" type finds its support in the language of 35 U.S.C. 101 which states that "whoever invents or discovers any new and useful process ... may obtain a patent therefor ..." (Emphasis added). Thus, the term "same invention," in this context, means an invention drawn to identical subject matter. See *Miller v. Eagle Mfg. Co.*, 151 U.S. 186 (1894); *In re Ockert*, 245 F.2d 467, 114 USPQ 330 (CCPA 1957); and *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970).

A statutory type (35 U.S.C. 101) double patenting rejection can be overcome by canceling or amending the conflicting claims so they are no longer coextensive in scope. The filing of a terminal disclaimer cannot overcome a double patenting rejection based upon 35 U.S.C. 101.

7. Claims 12,14,15,17,19 are provisionally rejected under 35 U.S.C. 101 as claiming the same invention as that of claim 4 of copending Application No. 09/938,387. This is a provisional double patenting rejection since the conflicting claims have not in fact been patented.

i) a receiver not recited in claim 4 of '387 application, which includes the subject matter of claim 1, is inherent in a GPS receiver.

ii) a first mixer is identically recited

iii) a comb filter is identically recited.

iv) a frequency shifter including at least one frequency generator and a plurality of second mixers is identical to a frequency receiver that comprises mixing the filter lines with at least one output of a frequency generator. It is noted that mixing the filter lines with at least one output of a frequency generator requires a plurality of mixers.

The only seemingly substantial difference is that in the '387 application a second mixer is further included that mixes the carrier-removed GPS signal and a separately received frequency reference signal. However, as discussed above in connection with the rejection of the claims under 35 USC 112 first paragraph, such a feature is essential and is considered implicitly recited in the claim of the present application. Thus, it is interpreted that the first resultant signal is mixed with the carrier-removed frequency reference signal before its mixing resultant is provided to the comb filter.

Claims 14 is equivalent to claim 2 of '387 application since both claims further include "a second frequency shifter" which is the same as a bandpass filter according to the specification.

Claim 15 is equivalent to claim 1 of '387 application since claim 3 now explicitly includes a third mixer that mixes a separately received frequency reference signal with the carrier-removed GPS signal.

Claim 17 is equivalent to claim 2 of '387 application since both claims further include "a second frequency shifter" which is the same as the bandpass filter according to the specification.

Claim 19 is equivalent to claim 7 of '387 application because both claims send a second compressed GPS to the base station.

Allowable Subject Matter

8. Claims 10, 11, 20 and 21, as enabled by including the essential feature, are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Kevin Y. Kim whose telephone number is 571-272-3039. The examiner can normally be reached on 8AM --5PM M-F.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Shuwang Liu can be reached on 571-272-3036. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

December 30, 2007

AU 2611

KEVIN KIM
PRIMARY PATENT EXAMINER

